GRUMMAN plane news

Vol. 35, No. 7, Bethpage, N.Y., April 9, 1976

# NASA picks Grumman for energy-saving ideas

NASA is trying to find out how to save more energy and has selected Grumman's Energy Programs to show the way. Grumman Aerospace has been chosen to begin energy utilization studies of the space administration's research and development technical facilities, and Energy Program teams are already in the field gathering information under a contract-coverage agreement. The formal contract signing is expected to be in late April.

The $1 million pact is Energy Programs' largest contract to date. According to Tim Murphy, program manager for the study, GAC and five other corporations were chosen by NASA as finalists out of the 60 firms that applied. On February 24, less than two months after NASA's request for expressions of interest, Energy Programs was notified that Grumman had won the contract.

Grumman will investigate energy usage at aero-test centers, test-and-launch centers, and other NASA research and development facilities as part of a multi-year program begun in 1973. The goal is to reduce the administration's energy consumption by 50 percent by 1985. John Mockoviack of Energy Programs will be NASA Headquarters liaison from Grumman's Washington office, and will be serving as project manager of NASA's Facilities Energy Management Program (FEMP). Rudy Richter of Energy Programs will also be in Washington providing management assistance for the FEMP.

**Investigating energy needs**

Most of Grumman's field work will be done at NASA's aero-test centers: Ames (San Francisco), Lewis (Cleveland), Langley (Hampton, VA), and the Jet Propulsion Laboratory (Pasadena, CA). There are between 60 and 70 wind tunnels at these facilities and the largest can test a full-size airplane. Some of the high-speed tunnels are capable of producing an airspeed up to 4000 mph, but they require blowers rated up to 180,000 horsepower to move the air for each test. According to Murphy, the high-speed wind tunnel at Lewis Aero-test Center must be run during off-peak night hours because of its huge electrical demands. "Otherwise," he explained, "they'd black out the whole city of Cleveland."

Energy Programs' primary job is to find ways for NASA to reduce the number and length of test runs for each tunnel. Murphy explained that the study is expected to establish faster methods of data processing, model positioning, and instrumentation checks during test runs, thereby reducing the time needed to obtain measurements. The study team may also determine if newer power equipment is necessary, develop an automated start-up shutdown system for the tunnels, and attempt to utilize the heat generated by air-moving systems.

**Drawing on range of talents**

The answer to NASA's energy saving campaign isn't just blowing in the wind tunnels, though. Other anticipated study areas include NASA's test-and-launch centers (Cape Kennedy, Johnson Space Center, and Marshall Space Flight Center) where Energy Programs will attempt to determine more efficient methods to operate environmental testing, launch, and utility systems. Murphy expects that some standardized conservation methods can be adapted for use by both launch and aero-test facilities. On an individual basis, five other NASA centers will be examined for possible incorporation of energy saving techniques.

The program will employ about 20 Grummanites during its peak.

*They're celebrating. Happy group from Plant 6 sees a significant connection between our nation's bicentennial and the completion of the 200th Tomcat at Grumman.*

# Readying 200th Tomcat for delivery at Calverton

There was a small celebration at Calverton a couple of weeks ago after the 200th F-14 rolled off the production line at Plant 6, was dressed in a sparkling paint job with red-white-and-blue tail motif, and then prepared for transfer to Plant 7 for final flight testing.

It wasn't coincidental that the F-14 was Grumman's "bicentennial" contribution to the U.S. Navy. After all, it was the 200th aircraft in the series and, of even more significance, the Tomcat had overcome a number of very critical obstacles in its development—much like the United States had to do in its infancy—and not only survived these crises but grew stronger as a result of them.

As Joe Rees sees it, no other plane in existence or in development could have lived through such a stormy and hostile environment. Joe, who succeeded Senior Vice President Mike Pelehach as program director on the F-14, presents a convincing array of data to back up that statement. Perhaps, looking back, marrying the Tomcat airframe with its swing-wing to the AWG-9 Phoenix weapon system—technically challenging as it was—proved to be the easiest task. There followed a series of hammer blows to the program that made the F-14's continuance a week-to-week uncertainty:

- The loss of the first F-14;
- A redesign of the hydraulic system that caused a stretch-out of the test and development program;
- A "stagflation" caused money-crunch that sent material costs skyrocketing and the business base plummeting, which also drove the F-14's fixed-price up. (Eventually, that increase resulted in approximately $235 million in losses for the company);
- That brought about sharp contract differences with the Navy over the F-14;
- And, as a spin-off of that situation, the company had to start production on the Tomcat before test and devel-

*(Continued on page 3)*

# Navy Salutes Hawkeye 'Pride of Workmanship'

Grumman recently hosted Wing Commander Ray Pettigrew, Commanding Officer of Airborne Early Warning Wing 12; Commander Dick Gentz, skipper of VAW-125; and Commander Hank Dombrowski, VAW-125 Executive Officer.

The officers came to Grumman to tell how the E-2C performed with VAW-125 in fleet operations aboard the carrier John F. Kennedy in the Mediterranean.

During this time, they praised manufacturing personnel for their skill and asked them to maintain their "pride of workmanship" which produced such a high quality product as the E-2C and which, they stated, enabled them to do a top job and get everyone home safely.

At a debriefing session in the board room, they thanked corporate management for the E-2C program and support personnel who worked as a team to maintain the high aircraft availability exhibited during deployment. Grumman efforts, the Navy Officers added, significantly contributed to the high-level maintenance displayed by the squadron.

*The way it was. Cdr. Dick Gentz, skipper of VAW-125, tells Grummanites at Plant 4 about top job E-2C performed from carrier JFK during Mediterranean deployment. (Photo by Fred Annette)*

# *CU reports business booming, offering more services*

In 1941, the Bethpage Federal Credit Union ended its first year of operation with 403 shareholders and assets of $8,900. Thirty-five years later, with a membership of 30,149 and assets of $68 million, it is one of the top 20 of nearly 13,000 Federal credit unions in the country.

On Wednesday, March 24, over 1,700 members gathered at the Huntington Town House for the annual meeting and dinner to learn that their Credit Union continues to follow the upward trend set during the past three-and-a-half decades. Nineteen seventy-five marked another year of growth and the board of directors predicted an even more promising future as the Credit Union moves toward becoming a full-service financial institution.

While an increase in assets of $18 million headlines the long list of 1975 achievements, several other accomplishments were cited at the annual meeting. For instance, last August, the first full-time staffed C.U. branch was opened at Calverton. Since its opening day, transactions by the C.U. members working at Calverton Operations have increased 50 percent, says manager Pete Seitz.

Other 1975 highlights were:

- expanded loan maturities—prior to March '75, four years was the maximum loan term. That has been raised to 10 years for home improvement loans and for such big-ticket items as airplanes, boats, motor homes, and mobile homes.
- improved loan service—it used to take two days to receive a loan check; now, it takes only one.
- traveler's checks are now available.
- direct deposit of social security checks is offered.
- you may cash personal checks up to $250, provided an equal or greater amount is in your share account.
- additional teller windows at C.U. are now working during traffic peaks (such as lunch time).

While president Ray Montano reported that 1975 was another year of growth and showed continued improvement in services, he did point out that last year members followed the nationwide trend of saving instead of borrowing. Only 55% of the Credit Union assets were invested in the form of loans to its members. "That loan-to-share ratio should be higher," states Seitz. "Out of the money being saved in the Credit Union for a dividend of 6%, only 55% is loaned out at an interest rate of 10.2%. The remainder of the shares goes into investments—government agencies, treasury notes, certificates of credit in large banks, and other extremely safe but low yielding securities. So, you see, it is beneficial for all the members when they borrow from their Credit Union."

For the three quarters prior to June '75, the interest rate was 6.5%. Since then, the dividend has been 6% each quarter. While assets increased 36% during '75, the total dollar amount of loans processed increased by only 23% from the previous year.

Also, since the first of the year, the loan-to-share ratio has dropped two percent to 53%. "Although the highest dividend allowed by law is 7%, that's not possible now until we get a much higher share-loan ratio," points out Montano. "When moneys borrowed from the C.U. increases, revenues go up—and increased revenues are very important when considering an increase in share dividend."

In the future when open-end credit is initiated at the Credit Union, borrowing will be even easier and quicker than it is now. According to Seitz, open-end credit is the establishment of an unsecured and/or secured line of credit that will do away with the need to fill out an application for loan requests. A member will know how much he or she can borrow both unsecured and secured, and will be able to apply for a loan simply by phone, mail, or in person at the loan teller windows.

Another projected program is share drafts. Members will be able to use share drafts much like they use personal checks. This service will make it possible for the Credit Union to participate in the new wave of electronic funds transfer systems. The share drafts will enable members to assess their savings and, eventually, their open line of credit without visiting the credit union.

As the Bethpage Federal Credit Union enters its 36th year of financial service to Grummanites, the future looks bright. To John Fessel, who recently retired after 34 years as the general manager of the C.U., the Bethpage Federal Credit Union has come a long way. "In the beginning, the average loan was for $75. And I remember the credit committee deliberating for a long time on whether or not to issue a $100 loan."

Last year, the credit committee approved 15,671 loans (an 11% increase over 1974) for a total of $34,275,898—over $2.8 million more than the previous year. Declared dividends to members was also a marked increase over the 1974 figure—from a little under $2.4 million to over $3.25 million. That's a far cry from the first year's annual report over 35 years ago.

## Dial-a-change

A lot of people have had telephone extension numbers changed lately and that, of course, requires changes in the Grumman Directory. To facilitate new listings, manager Al Zoitke of Telephone Services wants everyone to know about a new method of processing changes— in addition to submitting the usual telephone listing card.

Individuals can now call extension 3003 and give their full names, permanent numbers, and extension numbers to be listed in the Grumman Directory. Where called for, those who have the need can give unrestricted (reach) numbers that can be used by Grumman telephone operators or Security for incoming business or emergency calls. The new method will update the Grumman information operator on a daily basis and guarantee correct listings in the next directory following a change of number.

## Now serving ...

The next Liberty Luncheon will be here soon. On Wednesday, April 14, Grumman Food Service is offering a delicious discount on Yankee pot roast, a potato pancake (or mashed potatoes), and red cabbage. The price is $1.35 and entitles the buyer to a 15-cent beverage.


GRUMMAN plane news

Published twice a month for the employees of Grumman Aerospace Corporation, Bethpage, N.Y. 11714, as a function of the Public Affairs Dept., Vice President J. B. Rettaliata, director.

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# Rees: 'F-14's capability awesome . . . best in the world'

(Continued from page 1)

opment had been concluded—a difficult task to accomplish—because the government wanted to avoid a stretch-out of production. Such a stretch-out would have meant a restructuring (and cancelling) of the old fixed-price contract, a relief it wanted to avoid.

And not the least of all, the Grumman-Navy dispute drew nationwide press coverage and some vicious political sniping that caused many, many anxious moments for many, many people at Grumman, at its associate contractors, and in the Navy before the situation reached a settlement.

During that same stormy period, the Defense Department kept looking for an alternative way to go in hopes of getting a cheaper and better plane to replace the Tomcat. But on all counts and against all comers, the government's own technical analyses kept coming up with the same answer—the Grumman F-14 was the only way to go. So the F-14 did survive these early crises, but that was only possible, says Rees, because "the Tomcat is in a class by itself."

**Best initial deployment**

Should there be any doubt about that, the Navy has officially acknowledged that the Grumman F-14 had the best initial deployment of any fighter ever in the fleet—or, for that matter, any other type of tactical aircraft that has gone to sea. Add to that eight-month tour of duty aboard the U.S.S. Enterprise a year ago in the Pacific another very successful deployment recently concluded in the Mediterranean on the carrier John F. Kennedy, and it's not surprising that the Navy pilots who have flown the F-14 look to the Tomcat as the super-bird they've been wanting for a long, long time.

That's really not surprising to Rees. He points out that the F-14 was designed with that goal in mind. Joe, who came to Grumman nearly a decade ago following 25 years in the Navy, recalls when the F-14 was still in the design stage. He and Mike Pelehach, who then headed Advanced Systems, were discussing earlier fighter planes, particularly the ME-262, and the question that day was: How would the F-14's engines be positioned? "Mike, in demonstrating a theory he had, picked up a piece of chalk and started drawing a rough version of the plane as it was then developing, then sketched how the engines could be hung on a canted angle under the wings. You know, I wish I had a picture of that blackboard sketch because I think it would be almost exactly like the F-14 is today.

"And when we brought it down to show some people in the Navy," said Rees, "one of the older fighter jocks said 'that's the first clean bar of soap that's come down the river in a long time.'"

According to Rees, there was never any doubt with those associated with the program that the F-14 would be successful. It's not only highly maneuverable and a good fighter, the plane's full capabilities are still unrecognized, he feels, because both Grumman and the Navy need more time in flying it and experimenting with it to find out what its outer limits truly are.

"The Tomcat is really outstanding for fleet air-defense," says Rees. "It's stand-off kill capability with the AWG-9 radar and Phoenix missile is unmatched. And in simulated engagements against all possible threats, including the Soviet Foxbat, the Tomcat has come out on top. So it wasn't an accident that the Shah selected the F-14 for Iran...he knows it's the only plane in the world that can knock down any overflights of his country by high-flying supersonic planes.

"And should a combat ever degrade to close-in engagements—because a degradation is what it is—the Tomcat is still a superior plane. It has the maneuverability and agility and the fire power to win head-to-head confrontations."

As proof of that over-all superiority, Rees pointed to the Tomcat's recent deployment with VF-14 and VF-32 aboard the Kennedy. In a tactical scrimmage called "Project Lafayette," the F-14 was teamed with the Grumman E-2C against the best Mirage in France's air force operating under ground-control intercept radar. "In every engagement the F-14 waxed the Mirage. To really put that in perspective, you must consider that the Mirage was in hot competition with the F-16 to be the fighter aircraft for NATO nations, so it's truly a first-line plane.

"You know, I don't think it would worry the U.S. unduly if the Russians had a couple of thousand F-15s, or F-16s, or F-18s. But can you imagine if they had a couple of thousand Tomcats? That would really be frightening. The F-14's stand-off kill capability is awesome—it's the best in the world."

Of course, Rees points out that the Tomcat still isn't without problems. The TF-30 engine, although proven in the F-111 and A-7, had never before been subjected to the same kind of operational stress as it is now experiencing in the Tomcat. "We have had engine failures that have resulted in aircraft losses," says Rees, "but we and the manufacturer and the Navy are taking aggressive actions in correcting these engine problems. But improvements take time to come up with, and they also take time to implement." And though the Tomcat is recognized by fleet maintenance officers as being "very maintainable," keeping enough spare parts on hand to service the F-14 hasn't always been as successful as expected. But that generally holds true of all tactical aircraft in the fleet, says Rees.

*Tomcat takeoff. Looking clean and sleek as it lifts off runway at Calverton, F-14 No. 200 is shown on its first flight in this photo by Gerry Costello. Pilot Tom Gwynne and weapons system operator Roger Ferguson were at the controls.*

**Super-Tomcat in the works**

Uprating engines, though, is only a temporary solution to the Tomcat's future, Rees believes. When the plane was first conceived, the F-14 had three modes: the A version, using the TF-30 engine, was only for the early development planes; the B version would incorporate an advanced-technology engine that would give the Tomcat much greater thrust and combat effectiveness; and the C version would employ a multi-mode radar that would make it a true all-weather air-to-ground and air-to-air aircraft. But technical difficulties in developing the advanced-technology engine several years ago that resulted in sharply increased development costs caused the Navy to shelve plans for the "super" Tomcat.

*Joe Rees*

Now, considering the Tomcat's outstanding fleet record, its ability to accommodate the advanced-technology engine without major modifications to the airframe, and the recent spate of engine failures, the Navy is looking anew to equipping the F-14 with a more powerful engine. "I think we're finally getting around to the B version," says Rees. "Congress has allocated funds to the Navy to pursue further development of advanced-technology engines. If the Tomcat could be employed for more roles than it is now being used for, it would enable the Navy to reduce the proliferation of aircraft types on the carrier decks," he points out. "That would result in a lot of money saved because of the commonality of parts and systems —less inventory would be necessary—and it would reduce the many types of systems training now necessary and also the wide range of support equipment that must be on deck when you have many types of aircraft operating from carriers."

As Rees sees it, a very real danger to the F-14 program would be a Navy decision to let production slip to a couple of planes a month. Then the unit cost would rise dramatically, and with that rise, he feels, there would be an accompanying drop in the Tomcat's appeal. He also questions the logic of such a decision. "I know it's a cliché, but second-best is still a loser, so how much money do you really save by going with a loser? The F-14 is a multi-mission aircraft; it carries the Phoenix, and it's the only plane in the world that can carry it."

How about the last six or seven years. What have they meant to the man who first served as deputy director, and since December, director of the F-14 program. Have they had any special meaning? Says Rees: "Never in my life have I seen a team of people work so well under such difficult conditions as those associated with the F-14 program. They did a damn good job and I'm really impressed. They proved to me what Grumman can really do."

# people

The men of VT-31, stationed at Corpus Christi, Texas, have dressed up one of their Grumman US-2B Trackers to commemorate the nation's 200th anniversary. The idea to paint the plane with stars and stripes was offered by AZ3 Dick Nedich and members of the squadron's corrosion control shop volunteered their time during a Christmas-week lull in flying to prepare the Tracker for its symbolic role in this historic year. VT-31 squadron members have dubbed the Tracker their "bicentennial bird" and, according to Lt. Dan Kelly, the plane has not only become quite a celebrity around Corpus Christi, local newspapers and TV stations are also providing coverage on the red-white-and-blue Tracker and the Navy Photographic Lab is expected to give photos of the "bicentennial bird" world-wide distribution. How about that!

## Plan solo honor ...

Although the 50th anniversary of Charles Lindbergh's historic solo crossing of the Atlantic doesn't arrive until May 20, 1977, a number of the Long Island Early Fliers, along with those pioneers from the Missouri Historical Society, International Aerospace Hall of Fame, and Aero-Club of France are planning a number of ambitious projects and events to honor the event.

These and other aviation groups have petitioned the Postmaster General to issue a special commemorative stamp of the event, but according to Capt. Charles V. Dobrescu of Trans World Airlines, Lindbergh's friends are looking for additional help in convincing the Federal postal service that such a memorial is worthwhile. If you want to lend your support to the commemorative, write to: The Citizens Stamp Advisory Committee; c/o The Postmaster General; U.S. Postal Service; Washington, D.C. 20260.

## Looking for support

When the Suffolk County Council of the Boy Scouts of America looked around to find someone to head their fund raising effort for 1976, it wasn't surprising they asked Joe Gavin, President of Grumman Corporation, to do the honors. Gavin headed the company's Lunar Module team from the early Sixties, an effort that resulted in NASA landing 12 American astronauts on the moon. A number of Grumman men, including Gavin, received NASA's Distinguished Public Service Medal for their contributions to the lunar landing project.

Now Gavin seeks to aid the Scouts in raising over $500,000 in '76 to help support a range of activities, including camping facilities at Baiting Hollow on Long Island and Hitchins Reservation in the Adirondacks. On April 13, Gavin will preside at a fund-raising dinner at the Huntington Crescent Club which is expected to attract business and community leaders. Should you want to lend your financial assistance by attending the function, please contact Tom Kelly, Ext. 7424, or Ray Van Overschelde, Ext. 2546.

## Gonna dance all night

On Saturday, May 1, the lobby at Colonie Hill in Hauppauge will abound with colorful Navy displays, local industrial and political dignitaries, and many other personalities at the Navy Bicentennial Ball. The festivities, which will be for the benefit of the Cerebral Palsy Association, will begin at 8 p.m. and will include a cocktail hour, prime rib dinner, and a night of dancing. Among the entertainers will be Ray Heatherton and the Kings Point Sea Chanteers.

The fee, $48 per couple, is tax deductible since the proceeds go to the Cerebral Palsy Association. Tom Downey, U.S. Representative from the 2nd Congressional District who is also a member of the House Armed Services Committee, will be guest of honor at the ball. Seating will include five couples per table. For information, please contact: Herm Brumme, Ext. 9411, or Vincent DeVito, Ext. 3740.

## They've been honored

Jean Esquerre, a member of the Board of Directors of Grumman Aerospace and co-director of the Opportunity Development Department, and Vice President Ozzie Williams of Grumman International were saluted last week at the sixth annual Black Achievers in Industry dinner, held at the New York Hilton. The yearly salute, sponsored by the Harlem Branch YMCA, is to honor black men and women who have progressed in the arts, professions, politics, and industry, and highlights their achievements as an inspiration and guide to youngsters in black communities.

## New assignments

Among those who recently received changes in assignments were: BUSINESS DEVELOPMENT — Edward A. McNally Jr., deputy director, Product Development Center; DEPARTMENTAL OPERATIONS — Onofrio Florio, project leader, F-14 Electronics Packaging, Integrated Logistics Support; and in STUART OPERATIONS — Jim Houlik, director, Factory Ops. including Manufacturing, Tooling & Planning, and Industrial Engg.; Gardner Sidway, assistant to director, Factory Ops. for Estimating & Budgeting; Virgil Clerico, manager, Manufacturing; Joe Smitelli, manager, Planning & Industrial Engg.; John Seadon, manager, Tool Engg.; Bill Paxson, director, Resources and Material; Stan Hills, manager, Material; and Walt Stauber, staff assistant for special assignments.

# calendar

**Aikido Club:** every Mon. & Wed., 5:15 p.m., Pl. 35 cafe; guests welcome. Bob Bauman, x3886.

**Alcoholics Anonymous:** every Mon., 5 p.m., Pl. 39, classroom 1; closed meetings. Personnel Relations, x3521.

**Amateur Radio Club:** Wed., Apr. 21, 5 p.m., radio shack, roof of Pl. 5; local chapter; preplanning for ARRL Field Day; guests welcome. Emmett Goodman, x87125.

**American Production & Inventory Control Society:** Tues., Apr. 20, dinner 6 p.m., speaker 8 p.m., Maine Maid Inn, Jericho; local chapter; guest speaker: John Weingarten, Thiokol Chemical Corp.—"Purchasing & Production Control—Conflict or Cooperation"; guest welcome. Norm Heilweil, x2250.

**Fencing Club:** every Mon., 4:30-6:00 p.m., Pl. 30 cafe. George Kegney, x86048.

**Grumman Cycle Touring Club:** Sun., Apr. 25, 9:30 a.m., Friendly's, Syosset; local chapter; bicycle ride; GRU employees & families welcome. Don Gormley, x84739.

**Grumman Family Campers:** Apr. 23, 24, 25, Nassau Beach, Lido, LI; camping rally; by reservations only. H. Zembruski, x86385.

**Grumman Model Railroad Society:** every Wed., 5:30-9:30 p.m., Model RR Bldg. (at Pl. 3 rr crossing); reg. meeting; guests welcome. Ray Muntz, x87409.

**Grumman Toastmasters Club:** Wed., Apr. 21, 5 p.m., conf. room 1C, Pl. 25; local chapter; reg. meeting; guests welcome. Tom Smith, x87360.

**Karate Club:** every Mon., Tues., & Thurs., 5:30 p.m., Pl. 35 cafe; building character thru physical exercise & self-defense; guests welcome. Hy Dreksler, x86812.

**Retiree Club:** Wed., Apr. 28, 1:30 p.m., Holiday Manor; reg. monthly meeting. **Florida Suncoast:** Tues., Apr. 27, 11:30 a.m., S&S Cafe., Sears Town, 1235 So. Missouri Ave., Clearwater. **Florida Treasure Coast:** Thurs., Apr. 29, 12:30 p.m., Trade Winds Cafe., Sears Town, US Rte. 1, Fort Pierce.

**Florida Mid West:** Tues., Apr. 20, 11:30 a.m., Holiday Inn, Crystal River.

**Society of Logistics Engineers:** Tues., Apr. 27, 5:45-9:00 p.m., Holiday Manor, Bethpage; district 10, chapter 1; guest speaker: Rear Adm. (Select) E.J. Otth, USN—"Logistics Support Relative to the Latest Guided Missile Frigate FFG-1"; guests welcome. Ken Webster, x1576/Vahe Jordan, x1936; work shop offered from 5:00-5:45 p.m., Manor Room, Holiday Manor.

# obituaries

MORINO J. BELTRAMI of Central Setup Area, Plant 5, died March 15 at the age of 61. He had been with Grumman since 1942 and lived at 207 South 9th Street, Lindenhurst.

LOUIS LEFTENANT of Repro. Services, Plant 25, died March 17 at the age of 57. He had been with the company since 1963 and lived at 10 Grand Street, Amityville.

ARTHUR G. MILLER of Tech. Requirements, Plant 25, died March 20 at the age of 63. He had been with the company since 1964 and lived at 6 Heath Lane, E. Northport.

ROBERT M. GARAY of Maint. Waste Disposal & Ground, Plant 2, died March 24 at the age of 38. He had been with Grumman since 1974 and lived at 8 Ballad Circle, Holbrook.

ARTHUR SCHUELLAIN of Steel Parts Assy., Plant 2, died March 25 at the age of 62. He had been with Grumman since 1973 and lived at 121 Nassau Blvd. South, W. Hempstead.

ROBERT W. BONNER of Systems Engineering, Pl. 5, died March 28 at the age of 57. He had been with the company since 1966 and lived at 140 Dawson Lane, Jericho.

# Grumman salutes secretaries

Every year in April secretaries across the land are saluted during the week of April 18 to 24, when they are recognized for their service to business, industry, government, and the community, and Wednesday, April 21, is the special day designated as Secretaries' Day.

During this week, the National Secretaries Association (NSA) hopes to tell people all about a secretary's contribution to the business world. The Association will do this through forums provided by Chambers of Commerce, service organizations, and schools.

NSA works with the American National Standards Institute on the quality and standardization of office machines, participates in meetings called by the President to discuss women's role in the Nation's civic and economic problems, and attends meetings of the Congress of Career Women Leaders sponsored by the Federation of Business and Professional Woman's Clubs.

Each year Grumman salutes its own secretaries in recognition of their place on the team of production, engineering and other supporting services people who help in the creation of many of the world's finest tactical aircraft and who have made Grumman one of the prime aerospace companies in the nation.

The secretaries pictured clockwise from the upper left corner are: Lorraine Nixon, Mary Cooke, Marlene Wray, Chris Reed, Jeanette Hagans, and Pat Giovanelli. (Photos by Fred Annette)

# Time to sign up

The Annual Meeting of Grumman Shareholders is scheduled for 2 p.m. on Thursday, May 20, in Hangar 3, Plant 4. Starting April 13, Bankers Trust Company, Trustee for the Grumman Employee Investment Plan, will begin mailing to members of the Plan proxy statements and confidential cards for voting at the Annual Meeting, says Bob Bradshaw, Secretary of Grumman Corporation. Employees are asked to return the completed cards by May 13 to Bankers Trust Company in the self-addressed, postage-paid envelopes that will accompany the proxy statements.

The Annual Meeting is often the only opportunity to view the company's products for visiting shareholders. Because Grumman stock obtained through the Investment Plan is held in trust for each individual member, being a member in the Plan does not automatically entitle participants to attend the Annual Meeting, says Bradshaw. Only those persons owning stock of record—that is, stock purchased outside the Investment Plan prior to the record date of April 2—are eligible to attend.

Grumman personnel who own Company stock as of the record date (April 2, 1976) and who wish to attend the meeting should preregister at any office of Employee Services on any working day before May 18. (*Proxy cards should be mailed in the return envelope provided, of course.*)

Because of limited space at the meeting, shareholders are requested to refrain from inviting their spouses, children, or friends to the Annual Meeting.

# Balinsky on market– Invest for long haul

On October 4, 1973, Grumman Corporation elected Ed Balinsky Vice President-Investment Management with the job of recommending and implementing investment programs. One of his obligations is the investment of some $300 million in the Grumman Employees Pension Plan. His background for such an important responsibility is reassuring.

*Ed Balinsky*

Balinsky is a graduate of The Wharton School of Finance, and earned his master's degree in business at Columbia. While involved in financial planning at RCA, he was selected for a David Sarnoff Fellowship, which meant another year's study in advanced statistics and finance, again at Columbia. Before he came to Bethpage, he was vice president-finance and administration for an operating division of National Distillers and Chemical Corporation.

For the 15 years he spent in the field before joining Grumman, Balinsky has had to evaluate the quality of management, corporate planning, and financial outlook of more than 100 firms. This inside view of industrial America has provided him with some valuable insight for his position as fund manager.

During a recent interview, he said that the whole picture of pension management had changed in the past year. As he explains it: "The Employee Retirement Income Security Act (ERISA), passed in 1974, established strict guidelines to monitor pension funds. The law is long and complicated and has broadened the concept of the manager's fiduciary responsibility so much so that it is not yet clearly understood. So many companies now have out-of-house rather in-house management for their funds because they are unwilling to face, perhaps, prosecution for doing something, even in good faith and above-board, that might be called into question later under the law."

Balinsky went on to say that the feeling at Grumman was that the law places emphasis on corporate responsibility rather than the non-management of funds by business. "If we are going to be held responsible," he added, "why not be wholly responsible and keep the fund in-house where it can be molded and shaped according to our own particular pension needs. We know the composition of our work force, its requirements, and our own objectives. With all of this knowledge, we believe we can do a better job than anyone else in managing the pension funds."

**Change in philosophy**

In late 1973, Balinsky relates, Board Chairman Jack Bierwirth, then President of Grumman Corporation, decided to bring back one third of the pension assets from outside investors for in-house management. The result was extraordinary. House-managed investments consistently out-performed those directed by outside firms. Top corporate management became convinced that capabilities existed in-house to do a more effective job than outside investment houses and, by the end of 1975, the other two thirds of the fund were brought under Balinsky's control.

As fund director, Balinsky's stated philosophy is one of caution and conservatism. He feels that a steady investment program that is intelligent, well defined and thought out, and strictly adhered to regardless of fads produces the best results over the long haul. Some years may be better than others but over the long run such a program, given reasonable market conditions, will provide superior performance. Right now, he says, the in-house investment portfolio is almost equally divided between high quality stocks and bonds.

In-house management of Grumman's pension fund is the only way to go, Balinsky believes, not only to satisfy the requirements of ERISA but also to provide Grumman with the best of possible investment options. "We have the size," he says, "to afford an expert staff which we presently enjoy. This is an excellent arrangement because we have a group of people whose own careers are on the line and whose sole attention and only aim is directed toward the benefit of the Grumman pension fund."

# Looking ahead– energy house shows solar power can heat a home

*Solar home. Nestled in the snow, the energy house is as warm as it is pretty. With the help of 16 solar panels perched on the roof, the solar heating system designed by Grumman's Energy Programs heats the home even during Vermont's chilly winters. (Photo by Fred Annette)*

There's a home up north that saves the owner money every time the sun comes out. It's the "energy house" in Quechee, Vermont, designed and built as a prototype of future homes, which includes a solar heating system designed by Grumman Energy Programs.

The house was designed by Blue-Sun Ltd. and built by the Terrosi Construction Company, which is owned and operated by Bob Terrosi, a former Grummanite. The 2,300 square foot building is not a demonstration model; it is a commercial home, ready for purchase. It was designed to conserve energy (and money), fit into its natural surroundings, and still retain all the comforts and conveniences of a modern home. Because of its location at Quechee Lakes, a resort area, the price tag reads $110,000, but the same energy conserving features installed in the house can be incorporated into a smaller, less expensive home.

**'Home of the future'**

The "home of the future" was dedicated on March 6. Invited as guests of honor by Terrosi Construction and Energy Programs were Joe Gavin, President of Grumman Corporation, and Thomas P. Salmon, Governor of Vermont. The dedication gave Gavin the opportunity to follow the developments of Energy Programs, which he instituted in 1971.

He expressed his satisfaction with Grumman's involvement in the project this way:

"It's a very interesting demonstration of how a hybrid heating system can be incorporated into a house successfully. The most important thing about the Quechee home is that it proves no dramatic advancements have to be made to conserve energy. The system is not one of these Rube Goldberg contraptions. It's a well engineered, practical, going system. The details and construction appeared to be first class."

Speaking from an economical viewpoint, Gavin said; "It's true the initial investment is more, but the system will eventually pay off. In the future, I would hope more and more communities will provide tax incentives so the homeowner benefits from the installation of a solar system instead of being penalized financially for conserving energy."

What did he feel was the significance of the Governor's visit? "By being there, Governor Salmon demonstrated that he and the administration are interested in conserving energy. The state (Vermont) has been a leader in the field, and it wouldn't surprise me to see further actions to incur energy saving. I think the governor was impressed with the steps taken so far."

The house is a prototype of future American homes, and Gavin feels it has national—possibly international—importance. "I've said before that the question in the future will not be whether the emerging nations will emerge, but if the emerged nations will *stay* emerged. We have to make changes, advancements to maintain the style of life that we have, and that includes energy conservation. The house in Vermont proves it's possible to go ahead and save energy right now."

*Heating discussion. Joe Gavin (R), President of Grumman Corp., and Bob Terrosi (L), President of Terrosi Construction Company, discuss the energy conservation features and solar heating system of the energy house with Thomas P. Salmon, Governor of Vermont. (Photo by Fred Annette)*

According to Ed Diamond, Solar Integration Engineer for Energy Programs, the completed home is aesthetically satisfying as well as a successful energy saver. "It looks natural and is performing beautifully. So far the recorded performance is five percent to 10 percent better than expected; the solar system is cutting the energy consumption of the house in half."

The system has been operating since mid-December, and the measurements are being taken by Dartmouth's Professor Converse. During that time, there has been 55 percent sun availability, which is normal, and an average temperature of 20° F, which is also normal—for Vermont. On sunny days, at −20° F, the solar system carried the entire load, said Diamond.

The heart of the solar system is 400 square feet of Sunstream™ solar collectors which heat an anti-freeze liquid that is pumped to the basement. The heat gained from the collectors is transferred to the 2,400 gallon thermal storage tank and then to the distribution system through the use of a water-to-air heat pump. There is also a back up oil-burner for use during exceptionally cold or consecutively cloudy days. The system does not impose heavy loads on the utility company during peak periods and gives the homeowner the chance to respond to changes in fuel/energy prices.

**Many conservation features**

The Energy Programs team involved in the project (which includes Advanced Systems Manager Ken Speiser and engineer Odd Sangesland) stress one important aspect of the Sunstream™ system—its cost saving potential. As utility prices rise, a homeowner with a solar system in his energy-eating house can supply half its needs without fear of price increases. Right now, the system is competitive with oil and electrical heating. According to Diamond, as rates go up "our system looks increasingly better."

There's more to the house than the Grumman system, though. Other energy conservation features include:

- Thorough insulation—the equivalent of nine

(Continued on page 8)

# Varsity keglers lose first place in finals of L.I. Industrial play

In the race for the L.I. Industrial Bowling Tournament title, the Grumman varsity men keglers rolled to an early lead of 48 pins with a quick start on opening night, they increased their lead to 157 pins after the second night, and in the third session moved 166 pins ahead of the nearest of 15 other industrial teams. But in the final round, the competition began making their moves.

On the last night of the four-consecutive Saturday jaunts at Mid Isle Lanes in Hempstead, the Grumman keglers rolled a disappointing 765 five-man total in the first of three games. The powerful AMF squad took advantage of the slow pace, and moved into first-place residency, 9,088 to Grumman's 9,061.

The Grummanites put it all together in the second game with a 900 team effort, but the AMF squad not only held onto their lead, they increased it to 87 pins.

Meanwhile, the fourth-place team, A.I.L. was steadily gaining on both Grumman and AMF—and in the final game capped the 35th tournament title by rolling 957. Grumman crossed the tape only 27 pins behind A.I.L. for second place honors, with AMF falling to third.

In its second year of competition, Brookhaven National Lab garnered its first major win in the bowling event sponsored by Grumman by shooting 184 pins over its entering team average and was awarded the L.A. Swirbul Incentive Trophy.

Jerry Strong, captain of the Hazeltine team won the Outstanding Bowler Award by averaging over 199 in the 12-game tourney. Ed Small of Nassau County was presented the High Game Trophy as a result of his 267 game posted in the seventh game, and Joe Glasser of Grumman and Pete Marcon of Newsday gained runner-up honors with their 257 games.

*Runners-up. The Grumman varsity keglers finished second in the 35th annual L.I. Industrial Bowling tourney. Members of the squad are: (L to R) Tom O'Connor, Joe Glasser, Fred Dick, Barry Kasin, Charley Smith, and Mike Greggo. (Photo by Rich Breunig)*

# Castiglione pockets billiard title

Out of a field of 17 players entered in this year's annual GAA pocket billiard tournament, there were three former champions: Cosmo Scura, George Massey, and John DeMarco. But the 1976 title didn't go to a former champ... instead it went to Frank Castiglione.

In the opening round, Frank beat Thomas Leong, 75-21. He then took on five-time champ George Massey and defeated him, 75-52. John Mikals was the next victim to fall to Castiglione, 47-75.

In the quarter-finals, Frank outpocketed past billiard league and tourney champ, Cosmo Scura, 100-51. John DeMarco, the tourney's defending champion, also went down to defeat at the hands of Castiglione, 100-76.

DeMarco was given another chance at acquiring his second consecutive title, but when he moved down into the losers' bracket, Scura ended that hope as he beat DeMarco, 100-41.

In the final showdown in the two-defeats and out tourney, Castiglione outshot Scura, 100-52 for the 1976 GAA pocket billiard championship.

# *Newcomers sweep Oddballs off court*

The Newcomers had a lot to defend in the season's closing hours of the GAA basketball league. At the end of regular season play, the Kernks challenged the Newcomers with an identical record of 7-2. But the Newcomers rose to the occasion and trounced the Kernks, 102-67.

Bob Beattis and Columbus Poole were top offensive players for the winners with 22 and 21 points, respectively. Vinny Clerico led the Kernks with 17 points in the futile effort.

The Newcomers took a break in the action for the first round of the playoffs as the Kernks slipped again, this time to the third-place team, Oddballs.

In the first game in the best-of-three finals, the Oddballs, despite Jim Cruthers' 31 points, succumbed to the Newcomer's big offensive machine, 75-83. Poole was high man for the defending champs as he hit the hoop for 31 points.

Cruthers and Poole once again went basket for basket in the second game of the series; both were good for 40 points. But thanks to the efforts of defensive standouts, Don Martinoloch, John Ebron, and Lee Gendron, the Newcomers capped their second consecutive basketball title by winning 98-96.

# *Announce entry deadlines*

How's your tennis game? First service still a little rusty...second a patsy? Your net volley needs a little work? Require a little practice to sharpen your backhand and your overhead smash? Well, you have only four more weeks to pull your game together since the Grumman Athletic Association announced recently that its annual tennis tournaments are about to start.

Tennis is a booming sport, not only across the nation but also at Grumman. In addition to the sixth annual GAA men's tennis singles and doubles tournaments, GAA has initiated its first women's tourney (singles and doubles). It is also sponsoring the second annual mixed doubles contest, in which Molly and Dick Kline will be defending their title, and the third annual satellite tourney at Calverton.

Deadlines and tourney start-dates are:

**Men's singles and doubles:** deadline April 16 for May 3 starting time.

**Women's singles and doubles:** deadline May 28 for June 14 kick-off.

**Mixed Doubles:** sign-up no later than May 28 to play in June 14 opening round.

**Calverton Tourney:** submit entry form no later than April 16 for first round on May 3.

Here's how to enter: fill out the form on this page and mail it to GAA, Plant 30, no later than the above dates. Be sure to check off whether you will be playing in the singles and/or doubles competition. In the case of doubles, make sure that you include your doubles partner's name.

According to GAA tourney director Chet Baumgartner, contestants must arrange for courts and pay court fees. It is suggested that whenever possible matches be played on clay courts. GAA will supply the tennis balls for all matches, pay court fees for semi-final and final matches, and provide trophies for first- and second-place winners.

## Tennis tournaments

### Entry blank

Singles ☐ Doubles ☐ Mixed doubles ☐

Name ..... Ext. .....

Dept. ..... Plant .....

### Partner

Will he/she be playing in singles competition? Yes .... No ....

Name ..... Ext. .....

Dept. ..... Plant .....

Mail to: GAA, Plant 30

# More on energy house...

(Continued from page 6)

inches of fiberglass material on the roof and six on the outside walls.

- Triple glazed windows—like thermopane with a storm window.
- Special entrance alcove—to keep warm air in during the opening and closing of the outside door.
- Solarium—a room with skylights, large windows on three sides, and insulated shutters to keep the chill out at night.
- Windowless, insulated north wall—but enough skylights to make up for the lost lighting.
- Heatilator fireplace—a glass screen and special design allows fireplace to give off heat instead of sending it up the chimney.
- Sealed walls—to keep the cold air out.

There were also a variety of environmental factors to be considered before construction even began. In conjunction with the Blue-Sun architectural firm, Grumman and Terrosi Construction designed the home only after extensive analysis of the weather, climate, and prevailing winds. The result was that the house was built near a tree line as a wind break and insulated with urethane spray over vinyl-covered homosite, two newer but effective materials.

# Around and about...

Last year, the Grumman Model Railroad Club sponsored an open house for all Grummanites and their friends to inspect its new facility located near the Plant 3 railroad crossing. Even though the model railroaders had only begun to construct their large rail network, over 900 Grumman employees and family members attended the two-day open house.

Now, after 12 months of construction, the club is opening its doors once again. The 1976 Open House will take place on Wednesday, April 28, from 5 to 9 p.m. and Saturday, May 1, from 12 noon to 3 p.m.

Activities planned for the annual inspection include train operations, displays, and kit-building demonstrations. For more information, please contact Ray Muntz, Ext. 87409; Ted DeMund, Ext. 86321; Dave Sharp, Ext. 84752; Bob Vanderbilt, Ext. 86111; or Bob Michels, Ext. 2143.

## Needed: lockers

Ray Muntz, president of the Grumman Model Railroad Club, issued a plea for small storage lockers for use in the club's facility, appropriately located near the Plant 3 railroad crossing. If you can assist the club, please contact Muntz on Ext. 87409.

## Going on 36 ...

When you get to be a Senior Vice President and head all Long Island Responsibility Centers, you don't expect to be left off the monthly anniversary list in PLANE NEWS. In fact, there have been times when people of less corporate stature have become downright hostile at the oversight. But not Ed Dalva. He celebrated his 35th anniversary with Grumman in February and we didn't find out that we overlooked him until two months later. Congratulations...and sorry about that, Ed.

## United Way award

At the annual meeting of the United Way of Nassau-Suffolk on Thursday, March 25, Grumman Aerospace Corporation was the recipient of the Silver Award for its contributions to the 1975 United Way campaign. A Silver Award is presented to those companies that have at least 75% of their employees participating and contributing at least 50% of the employee dollar goal.

*Bound for Europe. U.S. Army ferry crews and Grummanites who prepared three Mohawks for flight to England pose for going-away photo. Front row (L to R): J. Roland, Capt. M. Crane, Capt. R. Faulker, CW3 L. Clark, Capt. D. Kerr; second row: J. Franzoso, H. Harris, G. Haulse, G. Maxwell, E. Hall, CW3 J. Erickson, R. Hunecke, W. Petterson, Capt. L. Dembromski, Lt. Col. E. Walsh, CW3 J. West, W. Bedell.*

# Mohawks go trans-Atlantic

In early March, U.S. Army pilots traveled to the Grumman facility at Stuart, Florida, to ferry three OV-1D Mohawks to their military intelligence company in Europe. The three planes, which had sustained heavy battle damage from ground fire in South Vietnam several years ago, were returned to the States and completely repaired and restored to "mint" condition at Plant 77. For the flight to Europe, the Mohawks were fitted with two 300-gallon external fuel tanks to replace the 150-gallon tanks they usually carry.

Although they are not normally considered to be ocean-spanning aircraft, the three Mohawks began their trek to Europe at Stuart, flew up along the East Coast, jumped off from Labrador to Greenland, then to England. The longest overwater leg was about 800 miles in length, and the three ferry crews logged approximately 30 flying hours on the flight that covered 5,700 nautical miles. How was the flight? The pilots described it as "routine."

Last last month, the Army awarded Grumman a $13 million contract for modernization and overhaul of 27 Mohawks, as part of the Army's continuing program to update its inventory of the twin-engine surveillance aircraft. The work will be performed at Stuart.

GRUMMAN plane news

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Vol. 35, No. 7, April 9, 1976, Bethpage, N.Y. 11714